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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,234	02/27/2004	Francois Abel	CH920040010US1	7973
7590	08/21/2007		EXAMINER	
Rafael Perez-Pineiro IBM CORPORATION Intellectual Property Law Dept. P.O. Box 218 Yorktown Heights, NY 10598			WEIDNER, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2616	
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			08/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/789,234	ABEL ET AL.	
	Examiner	Art Unit	
	Timothy Weidner	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 February 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method steps and functions of claims 1-17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Figures 5a and 5b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected

drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it contains greater than 150 words. Correction is required. See MPEP § 608.01(b).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### ***Arrangement of the Specification***

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities: Part (c) above should have a section heading. Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Objections***

Applicant is advised that should claim 17 be found allowable, claim 16 (or vice versa) will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after

allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claims 1, 16, and 17 are objected to because of the following informalities: incorrect word usage or grammar, see “successive” in lines 21, 22, and 23 respectively. With respect to dependent claim 3, and considering the definition of “successive,” the correction must comply with 35 USC § 112. This usage also appears in the Abstract of the disclosure. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 16 and 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Invention appears directed to functional descriptive material not claimed as embodied in computer-readable media. Applicant claims “computer program code means” and “computer program product directly loadable into the internal memory of a digital computer,” which is descriptive material *per se* and not embodied in computer readable media.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Roth et al. (US 2003/0231588 A1, herein "Roth").

Regarding claims 1, 9, 16, and 17, Roth teaches a computer program product directly loadable into the internal memory of a digital computer, comprising software code portions, when said program product is run on a computer, for allocating pending requests for data packet transmission at a number of inputs to a number of outputs of a switching system in successive time slots by a matching method that performs the allocation of the pending requests, the matching method including a number of steps for incrementally allocating the requests, wherein as a result of each step a matching information is provided, wherein in each time slot a request information is provided, the request information indicating the data packets at the inputs requesting transmission to respective outputs. The preamble is not given patentable weight because the steps do not rely on the language of the preamble for completeness. The matching method comprises the steps of: providing a first request information in a first time slot (paragraph 0037); performing a first step in the first time slot depending on the first request information to obtain a first matching information (paragraphs 0038-0040); providing a last request information in a last time slot successive the first time slot (paragraphs 0043-0044); performing a last step in the last time slot depending on the last request information and depending on the first matching information to obtain a final matching information (paragraphs 0037-0044); and assigning the pending data packets

at the number of inputs to the number of outputs in dependence on the final matching information (paragraph 0062).

Regarding claim 2, Roth teaches the matching method is performed in a first and a second thread, which are shifted, so that the first step of the second thread and a second step of the first thread are performed in the same time slot (paragraph 0083).

Regarding claims 3 and 10, Roth teaches between the first step and the last step of the matching method a number of intermediate steps are performed in successive intermediate time slots between the first time slot and the last time slot (paragraphs 0043, 0044), wherein a respective intermediate request information is provided in the respective intermediate time slot (paragraphs 0037-0044); wherein each of the steps provides an intermediate matching information to a successive intermediate step depending on an intermediate matching information from the preceding intermediate step and depending on a request information of the respective intermediate time slot (paragraphs 0037-0044), wherein the first step provides the first matching information to the first of the intermediate steps (paragraphs 0037-0044), and wherein the last step receives the intermediate matching information from the last of the intermediate steps (paragraphs 0037-0044).

Regarding claims 7, 8, 14, and 15, claims 8 and 15 as in the instant invention alternative, Roth teaches the request information is selectively provided to the first, intermediate and last steps depending on the current number of pending requests of each input relative to each of the outputs in the respective first, intermediate and last time slot (paragraphs 0066-0068, 0072-0073).

Regarding claims 4 and 11, Roth teaches the performing of one of the intermediate and the last steps includes the steps of: modifying the respective intermediate and last request information depending on the respective first and intermediate matching information provided by the preceding step (paragraphs 0044, 0066-0068); and performing the one step depending on the modified respective request information to obtain a partial matching information (paragraphs 0066-0068, 0074).

Regarding claims 5 and 12, Roth teaches the one step further includes the step of: merging the intermediate matching information provided by the preceding step and the partial matching information to obtain the respective intermediate or final matching information (paragraphs 0044, 0066-0068, 0073; "match accumulator").

Regarding claims 6 and 13, Roth teaches the partial matching information is modified depending on the matching information provided by any of the steps (paragraph 0074), as in the instant invention alternative.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McKeown (US 6,212,182 B1) teaches combined unicast and multicast scheduling. Matsuoka et al. (US 2002/0080796 A1) teaches cyclical use of multiple scheduling process results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Weidner whose telephone number is (571) 270-1825. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571) 272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJW

A handwritten signature in black ink, appearing to read "T. J. Wu".